REMARKS

I. Formal Matters

A. Priority

Examiner has noted that priority as amended was confusing. Accordingly, the specification is amended to correctly state priority. Further, the original oath and declaration submitted was in error, and a new corrected oath and declaration will be submitted as soon as it becomes available.

B. Double Patenting. Claims 1-4, 6 -12, 18 and 20 -22 were provisionally rejected under the judicially created doctrine of obvious-type double patenting over claims 1-4, 7 and 11 of copending Application No. 09/454,380. Applicants respectfully traverse this provisional rejection. The present invention is directed to a novel method of administration, specifically *nasal or respiratory* administration, whereas nasal or respiratory administration is not recited in the pending claims of Application No. 09/454,380. Accordingly, it is believed that a double patenting rejection is not appropriate, and it is respectfully requested that this rejection be withdrawn.

II. Claim Rejections Under 35 USC § 101

Claims 6 and 8 -12 were rejected for lack of a "credible utility." This rejection is rendered moot by cancellation of claim 6. Claims 8-12 are amended to correct dependency.

III. Claim Rejections Under 35 USC § 112, first paragraph

A. Claims 6 and 8 - 12 were rejected for lack of written description. This rejection is rendered moot by cancellation of claim 6.

B. Claims 1 -4, 6 -12, 18 and 20 - 22 were rejected on the basis that "while the application is enabling for a method of reducing body weight/fat and food intake in obese mammals while attenuating obesity associated hyperinsulinemia/reducing diet-restricted plasma insulin levels following administration of hCNTF of SEQ ID. NO:1 with particular modifications (i.e. AX-15), it does not does not provide enablement for the treatment of diabetes in general. "

In response, claim 1 is amended to recite the CNTF of SEQ ID NO:16 OR 17 and the phrase "obesity of a genetically determined origin" has been deleted from claim 3.

In response to the Examiner's assertion that there is no common mechanism for causing diet-induced obesity, "obesity of a genetically determined origin", or for causing any of the three forms of diabetes recited in the claims, or that AX-15 and insulin do not bind the same receptor, Applicants respectfully refer the Examiner to copending application 09/454,380 which provides data demonstrating that AX-15 is an effective treatment for diabetes, specifically producing a significant reduction in insulin resistance, a corresponding increase in insulin sensitivity, and improved glucose disposal. (See attached pages of such specification, Example 16 at pages 94 –104). As to the specific type of diabetes, it is known in the field that all types of diabetes are marked either by insulin resistance, or decreased or abrogated insulin production. The detriment of all types of diabetes is the impaired ability to regulate glucose. Current treatments for diabetes involve the application or insulin and/or the management of glucose levels such that less insulin is required. Good examples of such drugs include Troglitazone and Metformin, (See Diabetes Mellitus, A Fundamental and Clinical Text, 2 ed, pages 778 – 788). Any treatment, which would enhance the effectiveness of insulin or facilitate glucose regulation would therefore be therapeutic, potentially reducing the dosage of insulin or reducing the need to regulate glucose levels as judiciously. The claims in issue pertain to treating diabetes. Through the enhancement of the effectiveness of insulin and/or the facilitation of glucose regulation, the invention may be used commensurately with the scope of these.

Looking specifically at gestational diabetes mellitus, it is clear that this type of diabetes has much in common with Type II diabetes, and the two are often dealt with as one type of diabetes both in the literature and therapeutically. For a review of the current science in Gestational Diabetes Mellitus as well as support for this assertion, please see Diabetes Mellitus, A Fundamental and Clinical Text, 2 ed, pages 881 - 887, a copy of which is attached hereto for ease of reference. The Examiner states that one skilled in the art would not expect AX-15 to replace insulin in the treatment of Type I diabetes because they do not bind the same cellular receptor, and therefore cannot produce the same physiological response in insulin-responsive tissues. Applicants respectfully point out that it is not intended to claim the use of CNTF as a replacement for insulin in Type I diabetes. However it must be recognized that serum glucose levels can be lowered by non-insulin mimetic, for example by acting to reduce hepatic glucose

output by such drugs as Metformin (Diabetes Mellitus, A Fundamental and Clinical Text, 2 ed, page 778). There are also well described insulin independent mechanisms of glucose transport into peripheral tissues such as muscle and fat that do not require binding to the insulin receptor. Applicants respectfully assert that in fact AX-15 is useful in the treatment of diabetes, and the instant specification further substantiates its effectiveness when administered to either the nasal or respiratory passages. Accordingly, it is believed that the amended claims are fully enabled, and in light of the above amendments and remarks, this rejection should be withdrawn.

IV. Claim Rejections Under 35 USC § 112, second paragraph

Claims 1-4, 6 -12, 18 and 20-22 were rejected as indefinite. It is believed that the above amendments render this rejection moot.

V. Claim Rejections Under 35 USC § 102(b).

Claims 1-4, 6-7, 9 -12, 18 and 20 – 21 were rejected as anticipated by Ciliberto et al (WO 98/22128). It is believed that in light of the above amendments and remarks, this rejection is rendered moot. Accordingly, it is respectfully requested that this rejection now be withdrawn.

VI. Claim Rejection – 35 USC 102(f)

Examiner rejects claims 1 - 4, 6, - 7, 9 – 12, 18 and 20 - 21 under 35 USC 102(f). It is believed that the above amendment to the specification, which corrects the priority claim, renders this rejection moot, as both applications claim priority to USSN 09/031,693 filed 27 February 1998. Accordingly, this rejection may now be withdrawn.

Conclusion

In light of the above amendments and remarks, it is believed that the claims are now in condition for allowance, and such action is respectfully urged.

Fees

This amendment is being made in connection with a July 30, 2002 Office Action issued by the U.S. Patent & Trademark Office in connection with the above -identified application. A response to the July 30, 2002 Office Action originally was due on October 30, 2002. Applicants request a two-month extension of time to respond, from October 30, 2002 to December 30, 2002. The fee for a two-month extension is $400 and applicants hereby authorize such charge to Deposit Account number 18-0650. With the extension of time, a response to the July 30, 2002 Office Action is due December 30, 2002. If any additional fee should be deemed necessary, the Commissioner is hereby authorized to charge Deposit Account Number 18-050.

Respectfully submitted,

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MARKED UP VERSION SHOWING CHANGES MADE

In the Title:

USE OF MODIFIED CILIARY NEUROTROPHIC FACTOR

In the Specification:

Paragraph at page 1, lines 3-15:

This application is a continuation-in-part of United States Patent Application Serial No. 09/031,693 filed February 27, 1998, now US Patent 6,472,178, which application is herein specifically incorporated by reference in its entirety [which is a continuation-in-part of United States Patent Application Serial No. 08/645,07 filed May 13, 1996, which is a continuation-in-part of 08/308,736 filed September 19, 1994, which issued as United States Patent No. 5,846,935 on December 8, 1998, which is a continuation-in-part of United States Patent Application Serial No. 07/959,284 filed October 9, 1992 entitled "Ciliary Neurotrophic Factors" which issued as United States Patent No. 5,349,056 on September 20, 1994. Throughout this application, various patents and publications are referenced. Those patents and publications are hereby incorporated by reference in their entireties, into this application].

In the Claims:

1. (Once amended) A method of inducing weight loss in a mammal comprising administering a ciliary neurotrophic factor comprising the sequence of SEQ ID NO:16 or 17 to either the nasal or the respiratory passages of said mammal.

3. (Amended once) The method of claim 2, wherein said method is for the treatment of diet induced obesity [or obesity of a genetically determined origin].

7. (Amended once) A method of treating gestational or adult onset diabetes in a human comprising administering a ciliary neurotrophic factor comprising the sequence of SEQ ID NO:16 or 17 to either the nasal or the respiratory passages of said human.

12. (Amended once) The method [according to claim 6 or] of claim 7, wherein said ciliary neurotrophic factor protein is AX-15.

18. (Amended once) A method of treating a disorder responsive to ciliary neurotrophic factor in a patient, comprising administering [said] a ciliary neurotrophic factor comprising the sequence of SEQ ID NO:16 or 17 to either the nasal or the respiratory passages of said patient.